

Claims

1. An igniter assembly in which an igniter and a substantially cylindrical metal collar for holding the igniter from outside are integrated by a resin existing between the igniter and the metal collar,

wherein the substantially cylindrical metal collar has at least one of a protruding portion extending axially upward from a collar main body portion and a protruding portion extending radially inward from a collar main body portion, and at least part of the protruding portion is in contact with the resin, and

an outer surface of the substantially cylindrical metal collar and an outer surface of the resin are substantially in the same plane in at least one of the axial direction and the radial direction.

2. An igniter assembly as claimed in claim 1, in which the protruding portion extending axially upward from the collar main body portion is a cylindrical protruding portion and the protruding portion extending radially inward from a collar main body portion is a circular protruding portion.

3. An igniter assembly as claimed in claim 1 or 2, in which a material of the metal collar is iron or aluminum.

4. An igniter assembly in which an igniter and a substantially cylindrical metal collar for holding the igniter from outside are integrated by a resin existing between the igniter and the metal collar,

wherein the substantially cylindrical metal collar has at least a cylindrical protruding portion extending axially upward from a collar main body portion,

in the cylindrical protruding portion, a contacting portion where a circular end surface contacts an outer surface is cut and formed in a cylindrical stepped portion or a circular inclined surface,

the cylindrical stepped portion or the cylindrical inclined surface of the cylindrical protruding portion and an inner surface are covered with the resin, an outer surface except for the cylindrical stepped portion or the cylindrical inclined surface is not covered with the resin, and the outer surface of the substantially cylindrical metal collar and an outer surface of the resin are substantially in the same plane in the axial direction.

5. An igniter assembly as claimed in claim 4, in which a material of the metal collar is iron.

6. An igniter assembly as claimed in claim 4, in which the substantially cylindrical metal collar further has a circular protruding portion extending radially inward from the collar main body portion, a circular stepped portion or a circular inclined surface is arranged on the lower surface side of the circular protruding portion, and the circular stepped portion or the circular inclined surface is covered with the resin.

7. An igniter assembly as claimed in claim 6, in which a material of the metal collar is aluminum.

8. An igniter assembly in which an igniter and a substantially cylindrical metal collar for holding the igniter from outside are integrated by a resin existing between the igniter and the metal collar,

wherein the metal collar has such a strength as slightly deforms on receiving injection pressure by an injection-molding means of a resin,

the resin is charged between the igniter and the metal collar by the injection-molding means, and

a helium leakage quantity prescribed in JIS Z2331 in a contact surface between the metal collar and the resin is less than 1×10^{-6} Pa \cdot m³/s (air conversion).

9. An igniter assembly as claimed in claim 8, in which the metal collar has at least one of a cylindrical protruding portion extending axially upward from the collar main body portion and a circular protruding portion extending radially inward from the collar main body portion, and the cylindrical protruding portion or the circular protruding portion slightly deforms on receiving injection pressure by an injection-molding means of a resin.

10. An igniter assembly as claimed in claim 9, in which, in the cylindrical protruding portion, a contacting portion where a circular end surface contacts an outer surface is cut and formed in a cylindrical stepped portion or a circular inclined surface, the circular protruding portion has a circular stepped portion or a circular inclined surface in the lower surface side, and the cylindrical protruding portion or

the circular protruding portion slightly deforms on receiving injection pressure by an injection-molding means of a resin.

11. An igniter assembly as claimed in claim 8 or 9, in which the metal collar is made of aluminum or aluminum alloy that slightly deforms by the injection pressure of not less than 9Mpa.

12. An igniter assembly as claimed in any one of claims 1, 4 and 8, in which the resin is a polyamide resin.

13. A method of manufacturing an igniter assembly as claimed in claim 8 or 9, which comprises the steps of loading a resin between the substantially cylindrical metal collar and the igniter by an injection-molding means at the injection pressure of not less than 9MPa and then curing the resin with keeping the pressure of not less than 9MPa.